



## Prof. Paul Berg

Professor, Nobel laureate in Chemistry, 1980



### **Most important awards, prizes and academies**

*Awards:* Work on the genetic apparatus that directs the synthesis of proteins earned Dr. Berg the Eli Lilly Award in Biochemistry (1959) and the California Scientist of the Year Award (1963). He has twice been honored with the Henry J. Kaiser Award for Excellence in Teaching at Stanford University School of Medicine and has won the Roche Institute for Molecular Biology V.D. Mattia Prize, the Sarasota Medical Awards for Achievement and Excellence, the Annual Award of the Gairdner Foundation, the Albert Lasker Basic Medical Research Award, and the New York Academy of Sciences Award. He also has won the American Association for the Advancement of Science Scientific Freedom and Responsibility Award, the National Medal of Science, the National Library of Medicine Medal and the Nobel Prize in Chemistry. *Academies:* A member of the National Academy of Sciences and the American Academy of Arts and Sciences since 1966, he is also a past president of the American Society of Biological Chemists, a foreign fellow of the French Academy of Sciences and the Royal Society, London, and an elected member of the American Philosophical Society. Dr. Berg has served as a Chairman of the National Advisory Committee of the Human Genome Project.

### **Summary of scientific research**

Dr. Berg, one of the principal pioneers in 'gene splicing' and his colleagues Dr. Walter Gilbert and

Dr. Frederick Sanger were honored with the 1980 Nobel Prize in Chemistry for developing methods that make it possible to map the structure and function of DNA. According to *The New York Times*, the work of these scientists 'had a revolutionary impact on the understanding of the genetics of all living things and on the ability to manipulate the genetic material of cells from any species'. In quoting the Royal Swedish Academy of Sciences, this paper added that Berg was cited 'for his fundamental studies of the biochemistry of nucleic acids, with particular regard to recombinant DNA'.

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### **Main publications**

Berg, P., Physical and Genetic Characterization of Deletion Mutants of Simian Virus 40 Constructed In Vitro, Charles Cole, Terry Landers, Stephen Goff, Simone Manteuil-Brutlag, and Paul Berg., *J. Virol.*, 24, pp. 277-294 (1977); Berg, P., A Biochemical Method for Inserting New Genetic Information into SV40 DNA: Circular SV40 DNA Molecules Containing Lambda Phage Genes and the Galactose Operon of E. coli, David A. Jackson, Robert H. Symons, and Paul Berg, *Proc. Nat. Sci. USA*, 69, p. 2904 (1972); Berg, P., Construction of Hybrid Viruses Containing SV40 and Lambda Phage DNA Segments and Their Propagation in Cultured Monkey Cells, Stephen P. Goff, and Paul Berg, *Cell*, 9, p. 695 (1976); Berg, P., Synthesis of Rabbit beta-Globin in Cultured Monkey Kidney Cells Following Infection with a SV40 beta-Globin Recombinant Genome, R.C. Mulligan, B.H. Howard, and Paul Berg, *Nature*, 277, pp. 108-114 (1979); Berg, P., Expression of a Bacterial Gene in Mammalian Cells, R.C. Mulligan and Paul Berg, *Science*, 209, pp. 1422-1427 (1980).